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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,627	08/31/2000	Kevin C. Schramm	BFGHP0265US	4345

7590 06/18/2003

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EXAMINER

JEFFERY, JOHN A

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 06/18/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/652,627

Applicant(s)

SCHRAMM, KEVIN C. 

Examiner

John A. Jeffery

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2003 and 16 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G.-213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 19-28 is/are pending in the application.
- 4a) Of the above claim(s) 11-15 and 26-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 19-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 14, 15.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Request for Continued Examination After Final Rejection***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submissions filed on 4/17/03 and 5/16/03 have been entered.

Non-Elected Claims Without Traverse

This application contains claims 11-15 and 26-28 drawn to an invention non-elected without traverse in Paper No. 10.¹ A complete response to the final rejection should include cancellation of non-elected claims or other appropriate action (37 CFR 1.144). MPEP 821.01.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

¹ In Paper No. 8, the examiner characterized claims 11-18 and 26-28 as patentably distinct independent method claims and interpreted Applicant's election of the apparatus claims to be without traverse. Applicant subsequently accepted the examiner's characterization "as accurate," but nevertheless requested rejoinder of the method claims upon allowance of the apparatus claims. See Paper No. 10. In any event, the apparatus claims are elected without traverse.

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A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1, 4, 6, 10, and 19-23 are rejected under 35 USC 103(a) as being obvious over Stirzenbecher (US3697728) in view of Damron (US4374312). Stirzenbecher (US3697728) discloses an aircraft heated panel with aluminum face plate 14, and heater 24. The scope and breadth of the terms "lower support level" and "upper heater level" did not preclude the "lower support level" comprising aluminum 16 and honeycomb 12 and "upper heater level" including resistive foil 24. The claims differ from the previously cited prior art in calling for a pressure sensitive adhesive bonding the metal face sheet to the underlying support/heater layers. Damron (US4374312) discloses using a pressure sensitive adhesive 46, 48 to bond the electric heating element so that the element and support remains in a flat and secure position between the panel members. See Fig. 2 and col. 5, lines 31-47. In view of Damron (US4374312), it would have been obvious to one of ordinary skill in the art to provide a pressure sensitive adhesive so that the element and support remains in a flat and secure position between the panel members.

Claims 1, 3, 4, 6-10, 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reynolds (US2512875) in view of Stirzenbecher (US3697728), CA721834, and further in view of Damron (US4374312). Reynolds (US2512875)

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discloses an electrically heated panel including electric heater 16 within adhesive layers mounted to a honeycomb support. See Fig. 1, col. 4, line 20 - col. 5, line 43. The claims differ from the previously cited prior art in calling for a metal face sheet for protecting the top of the panel. While Reynolds (US2512875) arguably discloses a metal "face sheet" 20 that would inherently provide a protection function for the underlying panel structure, nevertheless, providing a metal face sheet for protection of the underlying heated panel in an aircraft is conventional and well known in the art as evidenced by Stirzenbecher (US3697728) noting aluminum sheet 14. In view of Stirzenbecher (US3697728), it would have been obvious to one of ordinary skill in the art to provide a metal face sheet in conjunction with the previously described apparatus so that the underlying panel and electric heating element were physically protected from traffic walking thereon. The claims also differ from the previously cited prior art in calling for pressure sensitive adhesive, and cured thermoset plastic material. While Reynolds (US2512875) is silent regarding the exact type of adhesive used to bond the layers together, the use of curable thermoset materials to bond layers together in an electric heater panel is conventional and well known in the art as evidenced by CA721834 noting Page 5, lines 1-14 wherein the bonding adhesive is disclosed to comprise thermosetting resins, thermoplastic synthetic resins, and the like. As noted in CA721834, such adhesives when cured do not soften or lose their electrical insulating properties at elevated electric heater operating temperatures. In view of CA721834, it would have been obvious to one of ordinary skill in the art to use thermosetting curable adhesives for the adhesives in the previously described apparatus so that the adhesives

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when cured do not soften or lose their electrical insulating properties at elevated electric heater operating temperatures. The claims also differ from the previously cited prior art in calling for a pressure sensitive adhesive bonding the metal face sheet to the underlying support/heater layers. Damron (US4374312) discloses using a pressure sensitive adhesive 46, 48 to bond the electric heating element so that the element and support remains in a flat and secure position between the panel members. See Fig. 2 and col. 5, lines 31-47. In view of Damron (US4374312), it would have been obvious to one of ordinary skill in the art to provide a pressure sensitive adhesive so that the element and support remains in a flat and secure position between the panel members.

Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reynolds (US2512875) in view of Stirzenbecher (US3697728), CA721834, Damron (US4374312), and further in view of "Flight International" article entitled "New Carbon Composite Material Developed", or alternatively, Stirzenbecher (US3697728) in view of Damron (US4374312) and further in view of "Flight International" article entitled "New Carbon Composite Material Developed." The claims differ from the previously cited prior art in calling for the honeycomb layer to be sandwiched between fiber layers. Sandwiching a honeycomb layer between fiber layers is conventional and well known in the art as evidenced by "Flight International" article entitled "New Carbon Composite Material Developed" noting the Fibrelam 2000 carbonfibre/honeycomb sandwich structure which provides a lightweight, yet strong panel support structure ideally suited for aircraft use. In view of "Flight International" article entitled "New Carbon Composite

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Material Developed", it would have been obvious to one of ordinary skill in the art to provide a honeycomb/fiber sandwich in the previously described apparatus so that the panel strength was enhanced by the presence of fiber layers over and under the honeycomb layer so that a lightweight, yet strong panel support structure was provided ideally suited for aircraft use.

Response to Arguments

Applicant's arguments filed 9/9/02 have been considered but are not deemed to be persuasive.

Applicant argues that Stirzenbecher does not allegedly disclose or suggest a heated panel with "a plurality of layers cured together to form a lower support level and an upper heater level" as required by independent claims 1 and 19. The examiner respectfully disagrees. As noted in the rejection, the scope and breadth of the terms "lower support level" and "upper heater level" did not preclude the "lower support level" comprising aluminum 16 and honeycomb 12 and "upper heater level" including resistive foil 24. Indeed, the terms "support level" and "heater level" can encompass a variety of layered structures ranging from a single layer to any number of multiple layers so long as the respective "levels" are capable of achieving the desired functions--support and heating. Here, nothing in the claims precluded the examiner interpreting the identified layers in Stirzenbecher to function as a "lower support level" and "upper heating level."

Regarding Damron, Applicant argues there is no teaching or suggestion to provide a pressure sensitive adhesive bonding the face sheet to the underlying

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support/heater layers and/or an elastic adhesive bonding the face sheet to the underlying support/heater layers to accommodate differing levels of thermal expansion. Applicant contends that because Damron's rationale for using tape strips (i.e., to ensure "flatness" and "secureness") would be inapplicable to the Stirzenbecher structure because Stirzenbecher allegedly does not need any further means to ensure the heater remains flat or secure, particularly in view of Stirzenbecher's recessed heating element mounting.

However, merely because the electric heater of Stirzenbecher has a recessed mounting does not necessarily mean that additional securement via a pressure-sensitive adhesive would not be desirable feature. Indeed, as is well known in the art, pressure sensitive adhesives such as tapes and the like have an additional advantage of being able to be applied quickly using the pressure-sensitive characteristics of the adhesive itself rather than a prolonged curing time to achieve adhesion. Moreover, their use in electrically heated panels is amply demonstrated by Damron. Thus, one of ordinary skill in the art would indeed be motivated to use a pressure sensitive adhesive in the electrically heated panel of Stirzenbecher to ensure additional securement of the respective layers while taking advantage of the inherent capabilities of pressure sensitive adhesives.

Final Rejection

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the

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application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this or earlier communications from the examiner should be directed to John A. Jeffery at telephone number (703) 306-4601 or fax (703) 305-3463. The examiner can normally be reached on Monday-Thursday from 7:00 AM to 4:30 PM EST. The examiner can also be reached on alternate Fridays.

The fax phone numbers for the organization where this application or proceeding is assigned are:

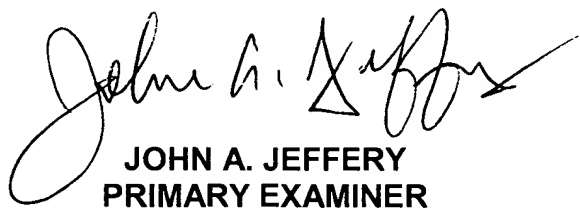
Before Final	(703) 872-9302
After Final	(703) 872-9303

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Customer Service

(703) 872-9301

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0861.



JOHN A. JEFFERY
PRIMARY EXAMINER

6/17/03